

Microtransducer CAD: Physical and Computational Aspects. By Arokia Nathan and Henry Baltes. Springer-Verlag, Vienna. (1999). 427 pages. \$189.00, öS 2086.00, DM 298.00, sFr 269.00.

Contents:

Notation. 1. Introduction. 2. Basic electronic transport. 3. Radiation effects on carrier transport. 4. Magnetic field effects on carrier transport. 5. Thermal non-uniformity effects on carrier transport. 6. Mechanical effects on carrier transport. 7. Mechanical and fluidic signals. 8. Micro-actuation. 9. Microsystem simulation. Subject index.

Computer Arithmetic: Algorithms and Hardware Designs. By Behrooz Parhami. Oxford University Press, New York. (2000). 490 pages. \$85.00.

Contents:

Preface. I. Number representation. 1. Numbers and arithmetic. 2. Representing signed numbers. 3. Redundant number systems. 4. Residue number systems. II. Additions/subtraction. 5. Basic addition and counting. 6. Carry-lookahead adders. 7. Variations in fast adders. 8. Multioperand addition. III. Multiplication. 9. Basic multiplication schemes. 10. High-radix multipliers. 11. Tree and array multipliers. 12. Variations in multipliers. IV. Division. 13. Basic division schemes. 14. High-radix dividers. 15. Variations in dividers. 16. Division by convergence. V. Real arithmetic. 17. Floating-point representations. 18. Floating-point operations. 19. Errors and error control. 20. Precise and certifiable arithmetic. VI. Function evaluation. 21. Square-rooting methods. 22. The CORDIC algorithms. 23. Variations in function evaluation. 24. Arithmetic by table lookup. VII. Implementation topics. 25. High-throughput arithmetic. 26. Low-power arithmetic. 27. Fault-tolerant arithmetic. 28. Past, present, and future. Index.

The Perl CD Bookshelf: 6 Bestselling Books on CD-ROM. O'Reilly, Sebastopol, CA. (1999). \$59.95. Includes bonus book, *Perl in a Nutshell: A Desktop Quick Reference*. By Ellen Siever, Stephen Spainhour and Nathan Patwardhan. O'Reilly, Sebastopol, CA. (1999). 654 pages.

Contents of CD-ROM: 1. *Perl in a Nutshell*. 2. *Programming Perl*, 2<sup>nd</sup> edition. 3. *Perl Cookbook*. 4. *Advanced Perl Programming*. 5. *Learning Perl*, 2<sup>nd</sup> edition. 6. *Learning Perl on Win32 Systems*.

Contents of bonus book:

Preface. I. Getting started. 1. Introduction to Perl. 2. Installing Perl. II. Language basics. 3. The Perl interpreter. 4. The Perl language. 5. Function reference. 6. Debugging. III. Modules. 7. Packages, modules, and objects. 8. Standard modules. IV. CGI. 9. CGI overview. 10. The CGI.pm module. 11. Web server programming with mod.perl. 12. Databases and Perl. VI. Network programming. 13. Sockets. 14. Email connectivity. 15. Usenet news. 16. FTP. 17. The LWP library. VII. Perl/Tk. 18. Perl/Tk. VIII. Win32. 19. Win32 modules and extensions. 20. PerlScript. Index.

Programming Internet Email. By David Wood. O'Reilly, Sebastopol, CA. (1999). 362 pages. \$34.95.

Contents:

Preface. 1. Electronic mail on the Internet. 2. Simple text messages. 3. Multipurpose Internet mail extensions. 4. Creating MIME-compliant messages. 5. OpenPGP and S/MIME. 6. vCard. 7. Mailbox formats. 8. Mailcap files. 9. The extended simple mail transfer protocol. 10. The post office protocol. 11. The Internet message access protocol. 12. The application configuration access protocol. 13. Email-related Perl modules. 14. The Java mail API. 15. Creating and sending a multipart mail message. 16. Archiving and cleaning a mailbox. 17. Watching an IMAP mailbox. 18. Anti-spamming techniques. 19. The future of email. Appendices. A. Internet RFCs relating to email. B. MIME media types. C. ASCII. D. Mail-related URLs. Glossary. Index.

Revolutions in Differential Equations: Exploring ODEs with Modern Technology. Edited by Michael J. Kallagher. The Mathematical Association of America, Washington, DC. (1999). 89 pages. \$18.75.

Contents:

Modeling and visualization in the introductory ODE course (Robert L. Borrelli and Courtney S. Coleman). Differential equations in the information age (William E. Boyce). A geometric approach to ordinary differential equations (Michael Branton and Margie Hale). Differential equations on the internet (Kevin D. Cooper and Thomas LoFaro). Data as an essential part of a course in differential equations (David O. Lomen). Qualitative study of differential equations (Valipuram S. Manoranjan). Teaching numerical methods in ODE courses (Lawrence F. Shampine and Ian Gladwell). Technology in differential equation courses: My experiences, student reactions (Beverly H. West).

Geometry from Africa: Mathematical and Educational Explorations. By Paulus Gerdes. The Mathematical Association of America, Washington, DC. (1999). 210 pages. \$39.95.

Contents:

Foreword. Preface: Geometrical and educational explorations inspired by African cultural activities. 1. On geometrical ideas in Africa south of the Sahara. 2. From African designs to discovering the Pythagorean Theorem. 3. Geometrical ideas in crafts and possibilities for their educational exploration. 4. The 'sona' sand drawing tradition and possibilities for its educational use.